DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-014845
Date Inspected: 11-May-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 1900
OSM Departure Time: 700
Location: Shanghai, China

CWI Name:	See Below	**CWI Present:**	☑ Yes ☐ No
Inspected CWI report:	☐ Yes ☑ No ☐ N/A	**Rod Oven in Use:**	☑ Yes ☐ No ☐ N/A
Electrode to specification:	☑ Yes ☐ No ☐ N/A	**Weld Procedures Followed:**	☑ Yes ☐ No ☐ N/A
Qualified Welders:	☑ Yes ☐ No ☐ N/A	**Verified Joint Fit-up:**	☐ Yes ☑ No ☐ N/A
Approved Drawings:	☑ Yes ☐ No ☐ N/A	**Approved WPS:**	☑ Yes ☐ No ☐ N/A
		Delayed / Cancelled:	☐ Yes ☑ No ☐ N/A

Bridge No: 34-0006
Component: Tower

Summary of Items Observed:
CWI Inspectors: Mr. Lin Yang, Mr. Li Lin

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

Dock North Tower

At 1625 hours today ZPMC presented QA personnel with “Notification of Witness Inspection” document number 5716 that states ZPMC is requesting Caltrans to perform visual and magnetic particle (MT) inspections of temporary weld removal areas on North tower lift 1. These temporary welds had been required to allow installation of plates to protect the tower skin plate corners when the tower was moved from the vertical to the horizontal position. Notification Item 1 states: “Corner seam B/C, C/D after temporary (weld) attachment removal area, approximately 1800mm length from the bottom” and notification item 2 states: “Corner seam B/C, C/D and E/A after temporary (weld) attachment removal area, approximately 300mm length from the top”. This QA Inspector performed random visual and magnetic particle (MT) inspections of the weld removal areas and these areas appear to comply with AWS D1.5 MT requirements. For additional information on these inspections see this QA Inspector’s TL6028 Magnetic Particle Test Report.

Tower Bay 10

This QA Inspector observed ZPMC welder Ms. Bu Xuezhen stencil 052075 is using flux cored welding procedure WPS-B-T-2331-TC-P4-F to make north tower skirt plate weld ND1-A28B/B-29. This QA Inspector observed QA Inspectors have documented a welding current of 310 amps and 31.0 volts. This QA Inspector observed ZPMC has electrical heating elements to maintain the base material temperature and ZPMC QC personnel appear to be monitoring the interpass temperature to ensure the base material is an acceptable temperature. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Ni Xiuba, stencil 040533 is using flux cored welding procedure WPS-B-T-2331-TC-P4-F to make north tower skirt plate weld ND1-A28B/B-32. This QA Inspector observed QA Inspectors have documented a welding current of 320 amps and 31.5 volts. This QA Inspector observed ZPMC has electrical heating elements to maintain the base material temperature and ZPMC QC personnel appear to be monitoring the interpass temperature to ensure the base material is an acceptable temperature. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder stencil 040367 is using flux cored welding procedure WPS-B-T-2331-TC-P4-F to make north tower skirt plate weld ND1-A26B/B-48 This QA Inspector observed QA Inspectors have documented a welding current of 310 amps and 31.0 volts. This QA Inspector observed ZPMC has electrical heating elements to maintain the base material temperature and ZPMC QC personnel appear to be monitoring the interpass temperature to ensure the base material is an acceptable temperature. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder stencil 040432 is using flux cored welding procedure WPS-B-T-2331-TC-P4-F to make north tower skirt plate weld ND1-A26B/B-40 This QA Inspector observed QA Inspectors have documented a welding current of 311 amps and 31.5 volts. This QA Inspector observed ZPMC has electrical heating elements to maintain the base material temperature and ZPMC QC personnel appear to be monitoring the interpass temperature to ensure the base material is an acceptable temperature. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Dong Yuqin, stencil 053116 is using flux cored welding procedure WPS-B-T-2332-TC-P4-F to make east tower skirt plate weld ED1-A27B/B-45. This QA Inspector observed QA Inspectors have documented a welding current of 325 amps and 32.0 volts. This QA Inspector observed ZPMC has electrical heating elements to maintain the base material temperature and ZPMC QC personnel appear to be monitoring the interpass temperature to ensure the base material is an acceptable temperature. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder stencil 045069 is using flux cored welding procedure WPS-B-T-2332-TC-P4-F to make east tower skirt plate weld ED1-A27B/B-21. This QA Inspector observed QA Inspectors have documented a welding current of 310 amps and 31.5 volts. This QA Inspector observed ZPMC has electrical heating elements to maintain the base material temperature and ZPMC QC personnel appear to be monitoring the interpass temperature to ensure the base material is an acceptable temperature. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder stencil 052926 is using flux cored welding procedure

WPS-B-T-2332-TC-P4-F to make east tower skirt plate weld ED1-A27B/B-25. This QA Inspector observed QA Inspectors have documented a welding current of 320 amps and 31.5 volts. This QA Inspector observed ZPMC has electrical heating elements to maintain the base material temperature and ZPMC QC personnel appear to be monitoring the interpass temperature to ensure the base material is an acceptable temperature. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Chang Chuan Gang, stencil 053870 is using flux cored welding procedure WPS-B-T-2132 to make facade build up channel assembly weld ND1-SFSA4-711-1-7 and ND1-SFSA4-711-1-8. This QA Inspector observed a welding current of approximately 300 amps and 31.0 volts and the base material had been preheated with a torch. Mr. Chang Chuan Gang appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder stencil 053864 is using flux cored welding procedure WPS-B-T-2132 to make facade build up channel assembly weld ND1-SFSA4-710-1-7 and ND1-SFSA4-710-1-8. This QA Inspector observed a welding current of approximately 310 amps and 30.0 volts and the base material had been preheated with a torch. Items observed on this date appeared to generally comply with applicable contract documents.

Tower Bay 11

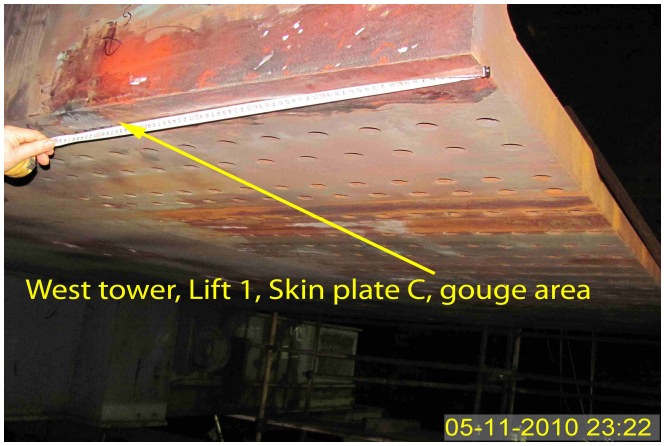
This QA Inspector observed ZPMC welder Mr. Wang Daping, stencil 040736 is using flux cored welding procedure WPS-B-T-2331-TC-P4-F to make west tower skirt plate weld WD1-A25B/E-11. This QA Inspector observed QA Inspectors have documented a welding current of 320 amps and 31.8 volts. This QA Inspector observed ZPMC has electrical heating elements to maintain the base material temperature and ZPMC QC personnel appear to be monitoring the interpass temperature to ensure the base material is an acceptable temperature. Items observed on this date appeared to generally comply with applicable contract documents.

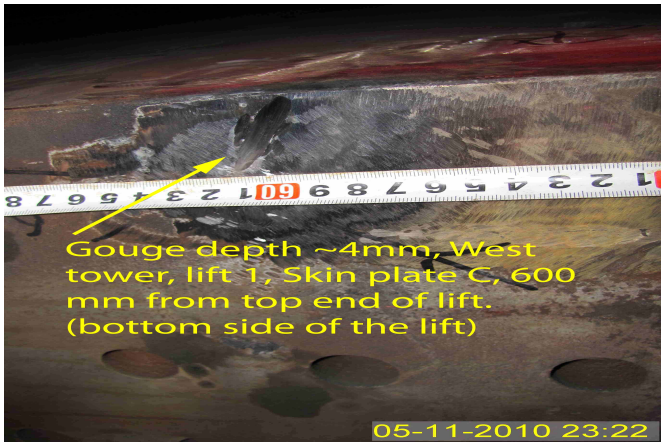
This QA Inspector observed ZPMC welder Mr. Zhu Ming Jun, stencil 040609 is using flux cored welding procedure WPS-B-T-2331-TC-P4-F to make west tower skirt plate weld WD1-A25B/E-02. This QA Inspector observed QA Inspectors have documented a welding current of 318 amps and 32.0 volts. This QA Inspector observed ZPMC has electrical heating elements to maintain the base material temperature and ZPMC QC personnel appear to be monitoring the interpass temperature to ensure the base material is an acceptable temperature. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhao Guiting, stencil 040723 is using flux cored welding procedure WPS-B-T-2331-TC-P4-F to make west tower skirt plate weld WD1-A25B/E-28. This QA Inspector observed QA Inspectors have documented a welding current of 310 amps and 31.80 volts. This QA Inspector observed ZPMC has electrical heating elements to maintain the base material temperature and ZPMC QC personnel appear to be monitoring the interpass temperature to ensure the base material is an acceptable temperature. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder stencil 205649 is using flux cored welding procedure WPS-B-T-2331-TC-P4-F to make west tower skirt plate weld WD1-A25B/E-34. This QA Inspector observed QA Inspectors have documented a welding current of 310 amps and 31.80 volts. This QA Inspector observed ZPMC

has electrical heating elements to maintain the base material temperature and ZPMC QC personnel appear to be monitoring the interpass temperature to ensure the base material is an acceptable temperature. Items observed on this date appeared to generally comply with applicable contract documents.





Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Skyler Guest, 150-0042-2360 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer